

Forest Fire Influence on Microbial Biomass of Forest Soils: A Review

Musa Akbas, Aydin Tufekcioglu, Bulent Saglam, Musa Dinc

Artvin Çoruh Üniversitesi, Orman Fakültesi, Orman Müh. Bölümü, Artvin, 08000, musaakbas15@artvin.edu.tr

Microbial biomass is one of the important component of the C and N cycling in soil. It directly affects soil biological activity. Being a storage medium for C and N, microbial biomass, interacts many biotic and abiotic environmental factors. Forest fires affect soil microbial biomass as other soil properties do. In this study, a general evaluation was made on the effects of forest fire on soil microbial biomass. In general, the effect of forest fire on soil microbial biomass is negative. Both natural and prescribed fires affect soil microbial carbon but the magnitude of the effect is larger in natural fires. This effect could be negative or positive in short term, but in long term the effect is mainly negative. The fire effected upper soil is generally adversely affected while the deeper soil is affected positively. Fire effect on microbial biomass should be evaluated considering climate and the other ecosystem components all together.

Keywords:Fire, Forest Ecosystems, Microbial Biomass, Soil Ecology.